

# ENDANGERED SPECIES

**Technical Bulletin** Department of Interior, U.S. Fish and Wildlife Service  
Endangered Species Program, Washington, D.C. 20240

## Recovery Plan Approved for Clear Creek Gambusia

The Clear Creek Gambusia Recovery Plan was approved by the Service on January 14, 1982. The Rio Grande Recovery Team which includes members from Texas Parks and Wildlife Department, New Mexico Department of Game and Fish, University of Texas, Oklahoma State University, University of Nuevo Leon and the Service prepared the plan.

The Clear Creek gambusia (*Gambusia heterochir*) was first collected on February 22, 1953, in Wilkinson Springs on the Clear Creek Ranch in Menard County, Texas. Listed as Endangered in 1967, it is only known to occur in the headwaters of Clear Creek located on the Clear Creek Ranch. The recovery plan identifies the major threats to the species as genetic and environmental competition with mosquito fish (*Gambusia affinis*) and potential development of its extremely restricted habitat.

Originally Clear Creek was a clear spring run that freely flowed about 5 km to its confluence with the San Saba River. Upper Clear Creek, which consists of a series of interconnected limestone springs originating from Edwards Aquifer, has been altered extensively for irrigation and domestic uses. Prior to 1900, a low, earth-concrete dam was built about 75 meters downstream from the headsprings. Three additional dams were built downstream from the original dam in the 1930's, ponding water to the base of each subsequent dam.

The Clear Creek gambusia has specific habitat requirements which restrict it to that part of Clear Creek with clear, sternohermal, low pH (6.1–6.5) waters having abundant aquatic vegetation composed mainly of an endemic, undescribed form of *Ceratophyllum* sp. Although at one time it may have been more widespread in the Clear Creek drainage, extensive collecting in 1956 and 1957 found this fish confined almost entirely to the spring-fed uppermost pool.

Where the Clear Creek gambusia and mosquito fish occur together, hybridization and competition for food occur. The mosquito fish generally associates with a eurythermal relatively alkaline environment in contrast to the requirements of the Clear Creek gambusia. However, its preference for warmer water causes a winter migration towards the head-spring where the Clear Creek gambusia is restricted. The first dam below the head-spring deteriorated over the years and has periodically allowed invasion of mosquito fish into the habitat of the Clear Creek gambusia. Repairs to the dam which were funded by the Service and carried out by recovery team members and associates in August and September 1979 have restored this barrier and at least temporarily blocked further immigration by mosquito fish.

A collection of rainwater killifish (*Lucania parva*) in Clear Creek in 1980 documents a recent new introduction and additional potential threat. Although a brackish water species, it is expected

to reproduce in Clear Creek and may compete for food and cover with the Clear Creek gambusia.

The Wilkinson family, landowners of the Clear Creek Ranch, have played a major role in conservation efforts for the species and have demonstrated a high level of environmental concern for the perpetuation of this fish. However, the ranch is presently for sale and the concern of future landowners cannot be predicted.

Recovery tasks identified by the plan for the recovery of the Clear Creek gambusia include further research into its biology, ecological requirements, and competition with the mosquito fish and rainwater killifish; protection of the headsprings habitat; maintenance of a captive population; possible restoration of the original habitat (i.e. the entire stretch of Clear Creek); and public information.

Implementation of the recovery plan will be initiated by the Service's Albuquerque Regional Director and carried out through the Albuquerque Regional Endangered Species Staff. Further information on the Clear Creek gambusia recovery effort can be obtained by contacting the Regional Director, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87130 (505/766-2321).

## Pupfish Removed from Endangered Species List

After a review of all available data, the Service has determined the Tecopa pupfish (*Cyprinodon nevadensis calidae*) to be extinct and has, therefore, removed it from the U.S. List of Endangered and Threatened Wildlife and Plants (F.R. 1/15/82). This action discontinues protection for the fish and its habitat provided by the Endangered Species Act of 1973, as amended.

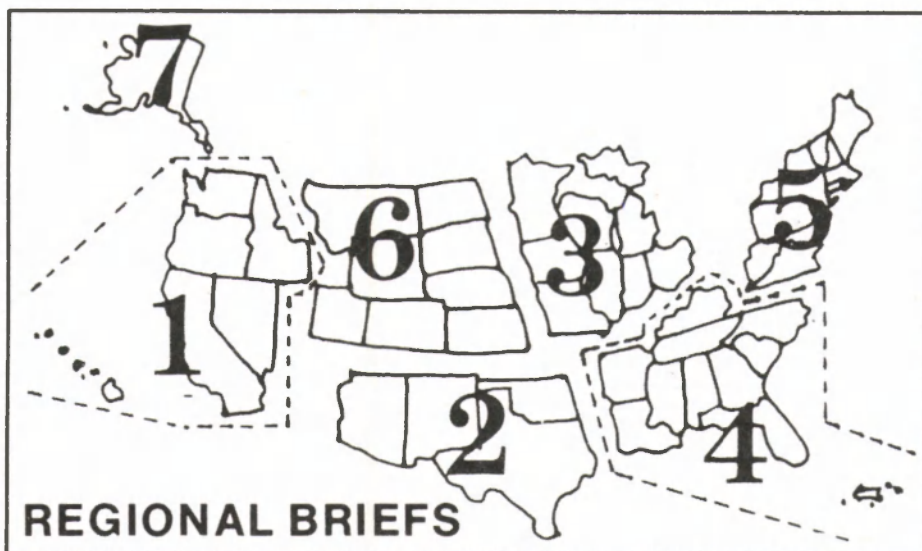
The Tecopa pupfish, a tiny fish only about 1.5 inches long, was described in 1948 by Dr. Robert Rush Miller from the outflow streams of two springs (north and south Tecopa Hot Springs) north of the town of Tecopa in southern California. During the 1950's, remodeling and landscaping of the hot spring bath-houses resulted in the rechanneling and

combining of two spring outflows, which in turn created unfavorable habitat for the pupfish.

The effects of habitat alteration, possibly combined with competition and predation from introduced fishes, caused such a precipitous decline in the population by 1969 that the fish was listed as Endangered by both the Federal and State governments in 1970. By 1972, it was reported to no longer occur at the type locality, and surveys in 1977 failed to locate any other population.

A proposal to remove the Tecopa pupfish from the Federal list of Endangered species was published in the *Federal Register* on July 3, 1978. The California Department of Fish and

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## REGIONAL BRIEFS

Endangered Species Program regional staffers have reported the following activities for the month of January:

**Region 1**—An artificial pond population of the Endangered Mohave tui chub (*Gila biocolor mohavensis*) at Fort

Soda, California, recently was extirpated. The cause of the die-off, which did not affect a nearby natural lake population of the chub, is unknown.

The Sacramento Area Office endangered species staff met with the remaining California Department of Fish

and Game Endangered Species Staff to coordinate programs for the coming year. Because of no new Section 6 funding in Fiscal Year 1982, California's Endangered Species Program will be greatly reduced. State biologists are resigning from Recovery Team Leader positions on at least two recovery teams, and the emphasis of staff time will be on processing State endangered species permits.

The final draft of the Southern Sea Otter Recovery Plan has been approved by the Director.

The Sacramento office has released a report on the results of the California mid-winter bald eagle surveys, 1979–1981. Approximately 700 to 900 bald eagles were counted annually. The California portion of the Klamath Basin supported almost half of the eagles in the State. Manmade reservoirs are the second most important habitat, supporting approximately 37 percent of California's bald eagles.

A revised edition of the *Bald Eagle Management Guidelines: Washington-Oregon* was issued in December 1981. The guidelines, created for use by landowners and land managers, describe restrictions in activities and management recommendations that should be applied around bald eagle nest and roost sites. The guidelines are advisory only, and past editions have been well received by the numerous private and governmental land managers who oversee bald eagle habitat in Washington and Oregon. Single copies may be obtained from the Area Manager, U.S. Fish and Wildlife Service, 2625 Parkmont Lane, Olympia, Washington 98502.

**Region 2**—Recently, 146 adult razorback suckers (*Xyranchea texanus*) were moved from Lake Mohave to the Dexter National Fish Hatchery as part of a cooperative program with the States of Arizona and New Mexico. Over one million eggs have been produced at Dexter, with several million more expected. Young razorbacks from these eggs will be stocked in the wild, or made available to the States for rearing or stocking in lieu of listing the species. (For more on the stocking program, see the September 1981 BULLETIN.)

**Region 4**—During the January meeting of the Columbia Dam Coordination Committee, the Tennessee Valley Authority (TVA) reported completion of its 2-year field study, which was designed to gather information for its Cumberlandian Mollusk Conservation Program. An evaluation of the distribution, host fish requirements, habitat, and potential translocation sites was conducted for two listed species, the Cumberland monkeyface pearly mussel (*Quadrula intermedia*) and the birdwing pearly

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### U.S. Fish and Wildlife Regions

Region 1: California, Hawaii, Idaho, Nevada, Oregon, Washington, and Pacific Trust Territories. Region 2: Arizona, New Mexico, Oklahoma, and Texas. Region 3: Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. Region 4: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Puerto Rico, and the Virgin Islands. Region 5: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia. Region 6: Colorado, Kansas, Montana, Nebraska, North Dakota, South Dakota, Utah, and Wyoming. Region 7: Alaska.

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## Leopard Reclassified as Threatened in Southern Africa

After a lengthy review, the leopard (*Panthera pardus*) has been reclassified by the Service to Threatened in part of southern Africa (F.R.1/28/82). The change in status under the Endangered Species Act affects populations in Gabon, Congo, Zaire, Uganda, Kenya, and all African countries to the south. It will remain classified as Endangered in all other parts of its range, and leopards everywhere will be retained on Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). A special provision of the final rule allows the importation of sport-hunted trophies legal-

ly taken from the reclassified populations, under the terms and conditions imposed by CITES. The importation of leopard products for commercial purposes, including the fur trade, was always the main threat to the species, and will continue to be prohibited.

### Background

The leopard is the most widely distributed species of cat, occurring throughout most of Africa, and from Asia Minor to China, Korea, Japan, and Java; it is also found in India, Sri Lanka, and southeast Asia. Widespread poaching

and overexploitation of this cat for the fur trade, especially during the late 1960s, created an enormous drain on wild populations and led to its original listing in 1972 as Endangered under the Endangered Species Conservation Act of 1969.

On the basis of three major studies on the leopard conducted since the 1972 listing, which indicated that populations are stable or increasing in most sub-Saharan countries, the Service proposed on March 24, 1980, that those populations be reclassified to Threatened (see April 1980 BULLETIN). The

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## CITES NEWS—January 1982

*The Endangered Species Act of 1973, as amended in 1979, designates the Secretary of the Interior as both the Management Authority and the Scientific Authority of the United States, for the purposes of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Management Authority responsibilities are delegated to the Associate Director—*

*Federal Assistance; Scientific Authority responsibilities are delegated to the Associate Director-Research.*

*The Service's Wildlife Permit Office (WPO) functions as staff to the U.S. Management Authority for CITES, assuring that wildlife and plants are exported or imported in compliance with laws for their protection and issuing permits for legal trade of these species.*

*The Service's Office of the Scientific Authority (OSA) functions as staff to the U.S. Scientific Authority for CITES. OSA reviews applications to export and import species protected under CITES, reviews the status of wild animals and plants impacted by trade, makes certain findings concerning housing and care of protected specimens, and advises on trade controls.*

## Service Proposes Removal of Bobcat from Appendix II

The Service announced its determination that the bobcat (*Lynx rufus*) is inappropriately included in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and its decision to submit a proposal to remove United

States and Canadian populations from Appendix II of CITES (F.R. 1/11/81). A preliminary notice which announced the intent of this proposal and requested public comments was published earlier (F.R. 9/14/81).

During the comment period for the

September 1981 notice, the Service received a total of 15 letters from persons and organizations: 12 in favor of removal of the bobcat from Appendix II of CITES and 3 opposed. Nine comments in favor of delisting were from State wildlife agencies of Alaska, Alabama, Arkansas, California, Florida, Nevada, New Mexico, Tennessee, and Texas. The Montana Wool Growers Association, the National Wildlife Federation, and the Texas Sheep and Goat Raisers Association also commented in favor of delisting. Comments against delisting were submitted by the Animal Protection Institute of America, the Defenders of Wildlife, Inc., and the Humane Society of the United States.

Defenders of Wildlife was the only group to submit detailed reasons for their position on the proposal. The Service responded in the January notice to each of Defenders eight points of contention. (Please consult the *Federal Register* [Vol. 47, No. 6, pp. 1242-1246] for the text of these responses.) The same document includes a summary of available information about the bobcat and a discussion of

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## Bobcat Rule Suspended

A final rule (F.R. 10/14/81) authorizing the export of bobcat (*Lynx rufus*) taken during the 1981-82 season is suspended by the Service for a 6-month period (F.R. 1/12/81). This action, taken to conform with the U.S. District Court injunction prohibiting the Service from authorizing the export of bobcat after July 1, 1981, became effective January 12, 1982.

On February 3, 1981, the District Court for the District of Columbia found the Office of the Scientific Authority's (OSA) guidelines for allowing export invalid and issued an injunction which prohibited the Service from authorizing export of the species under CITES. In light of this, the Service postponed the

effective date of its October 1981 final rule for 60 days while it sought vacation of the injunction. However, on December 15, 1981, the District Court denied the motion of the Service to vacate the injunction on grounds that OSA failed to promulgate guidelines consistent with a previous ruling by the U.S. Court of Appeals.

Accordingly, the Service remains under court injunction prohibiting the export of bobcat and suspends the October rule for 6 months. Further notice concerning the export of bobcat will be provided when information becomes available. (See the November 1981 BULLETIN for more information on the October 1981 rule.)

# Cooperative Efforts Assist State

Very hot weather and bothersome mosquitos which plagued Reelfoot Lake in northwestern Tennessee this summer did little to squelch the enthusiasm of Dr. and Mrs. Arlo Smith, volunteers from the Tennessee Ornithological Society (TOS) and retirees from Southwestern University in Memphis. On their own time and at their own expense, this couple set up camp close to an observation tower at Reelfoot on June 22, 1981, and set about implementing an eagle hacking project which they had carefully planned in conjunction with the Tennessee Wildlife Resource Agency (TWRA).

The Smiths were given custody of three eaglets which were delivered to TWRA by the Fish and Wildlife Service and the Missouri Department of Conservation for the purposes of the project. (All three birds had been blown from nests in Minnesota and Wisconsin; the Wisconsin eaglet had received interim care at the University of Minnesota's raptor rehabilitation center.) TWRA placed the eaglets in an artificial nest at Reelfoot and commenced daily feeding. Dr. and Mrs. Smith assisted with feeding and monitoring the eaglets for 7 weeks. The Smiths were relieved on weekends by 11 other members of TOS who, in pairs, continued the feeding and observation procedures.

Each day members of TOS climbed the 54-foot ladder up the side of a cypress tree in order to enter the Observation Room. Here they spent long hours observing the eaglets which were on a hacking platform in a second cypress 90 feet away. The observers recorded information such as excitability, aggression, intimidation, alertness, wing-flapping, growth, preening, and posture. On August 6, the eaglets were released from the hacking platform.

The eaglets apparently migrated from the general area since radio contact with the birds was lost after 6 days of release. On December 15, the Wisconsin eaglet was found in South Dakota, injured by a trap from which it had been released. It was returned by Service employees to Dr. Patrick Redig at the University of Minnesota center. Upon determining that the eagle could not recover, Redig euthanized it. The whereabouts of the other two eaglets is unknown.



One of the Reelfoot eaglets—just released from the hacking platform on August 6, 1981.

Valuable data and experience was gathered through this project, and TWRA has hopes that through additional similar efforts nesting eagle populations can be re-established in Tennessee. No successful nesting has been known to occur in the State since 1961, when eagles nested at Reelfoot.

In addition to working with the Reelfoot project, TWRA and the Tennessee Valley Authority (TVA) have cooperated in another hacking project at TVA's Land-Between-the-Lakes. In 1980, when several eaglets became available to the State sooner than anticipated, TVA had the necessary resources to construct hacking and observation towers on short notice and eventually hacked both birds. In 1981, three captive-bred eaglets (two from Patuxent Wildlife Research Center and one from Columbus, Ohio Zoo) were hacked from the Land-Between-the-Lakes operation.

The osprey (*Pandion hallaetus*), listed for protection by the State, has also undergone a decline in Tennessee. However, 5 years ago it began making a comeback and in 1981, there were five known nests. A total of forty-seven 6-week old ospreys have been intro-

duced from the Chesapeake Bay (Maryland and Virginia) at 15 hacking platforms across Tennessee in a cooperative program with TVA. Members of TOS and others volunteered for daily feedings of the introduced ospreys.

## The Tennessee Program

In 1974, the Tennessee State legislature passed the "Tennessee Nongame and Endangered and Threatened Wildlife Species Conservation Act" and assigned responsibility for its implementation to the Game and Fish Commission. During the same year, the Commission's name changed to TWRA, in order to reflect the agency's broader responsibilities. From 1974 through 1977, Tennessee's nongame and endangered species program (NG-ES) was implemented by one biologist, William Yambert. During 1978, the NG-ES program was handled by three full-time biologists: William Yambert, Robert Hatcher, and Thomas Grelen. Since early 1979, the program has been coordinated by Hatcher.

Regarding the hard work and enthusi-





This 3-inch fish is confined to a single manmade pond and a few headwater streams of eastern middle Tennessee.

asm of the Smiths and other members of TOS. Hatcher recently expressed gratitude: "We are fortunate to have many capable and interested people like the Smiths to help us with our endangered species needs. Many of our conservation efforts are carried out completely, or in cooperation with TWRA, by private citizens, conservation groups, Federal government agencies, and other State agencies. We work especially closely with the Tennessee Department of Conservation's Tennessee Heritage Program, and have cooperated in several projects with TVA, in particular."

#### Citizens Cooperate

TWRA has found that most landowners are receptive to protection of endangered species habitat if they recognize that they own something unique. TWRA has negotiated a total of 13 written cooperative agreements, and has about 10 more in progress. A number of oral agreements have also been established. TWRA has posted signs (see accompanying illustration) to alert passers-by about key habitat areas and to request their cooperation.

A very important cooperative agreement is one which has been reached with Joseph and Bertha Banks in Summitsville, Tennessee. A small manmade pond on their land contains 90 percent of the known barren's topminnow (*Fundulus* sp.). The Banks rec-

ognize the uniqueness of their situation and are anxious to protect these endangered fish. An agreement to protect the species and its habitat has been reached between the Banks, the TWRA, and the Nature Conservancy (TNC). The agreement maintains the Banks' rights as landowners, while simultaneously ensuring the protection of the topminnow.

Dr. David Etnier, the ichthyologist from the University of Tennessee who described the now well-known snail darter, has found very small numbers of the topminnow in two streams not far from the Banks' pond, in Meadow Branch and a tributary to Hickory Creek. In the fall of 1981, Etnier alerted TWRA that the water level in the Banks' pond was dangerously low. Accordingly, TWRA biologists removed most of the fish and placed them in aquariums. Recently, since the water level has again risen, the minnows were put back into the pond. Survival of the species depends on protection of water quality and quantity and the avoidance of channelization or gravel dredging.

The four sites in Tennessee where red-cockaded woodpeckers (*Picoides borealis*) are known to nest are all being preserved with land owner cooperation. Research is being done to determine optimum silvicultural methods for regeneration of preferred pine tree species which the birds use for nesting.

In order to avoid the sale and development of a site in Davidson County

where a black-crowned night heron (*Nycticorax nycticorax*) rookery has existed since 1908, TWRA, the Audubon Society, the Nature Conservancy, the TOS, and the Service cooperated to purchase the land. The species which is protected by the State, has only five known remaining nesting colonies, four of which are in east Tennessee.

Cooperative agreements are also being made with owners of caves which provide habitat for the Indiana bat (*Myotis sodalis*) and gray bat (*Myotis grisescens*) in order to limit human entrance to the caves during seasons of occupation. The Indiana bat exists in 10 caves in Tennessee; there are 67 gray bat caves with over 90 percent of the bats depending on a few caves for winter hibernation.

#### Other Program Activities

An initial top priority of TWRA's NG-ES program was to compile all available information about the status, limitations, and needs of Tennessee's rare wildlife. TWRA and the Tennessee Heritage Program jointly sponsored the development of *Tennessee's Rare Wildlife*. The first volume of this species' status report, "The Vertebrates," was published in 1980. The second volume, "The Invertebrates" will be printed in the near future.

TWRA sponsored a project launched at the Tennessee Technological University which seeks methods to determine the age and annual reproductive success of bobcats (*Lynx rufus*). These methods have been sought for evaluation of bobcat population trends due to

### KEY WILDLIFE HABITAT



**THIS HABITAT SUPPORTS  
UNIQUE WILDLIFE SPECIES**

**GRAY BAT**

**INDIANA BAT**

**PLEASE DO NOT DISTURB  
STATE/FEDERAL  
LAWS APPLY**

**THIS IS A TWRA - LANDOWNER  
COOPERATIVE PROJECT**

*Copies of this sign are posted near active bat caves in order to help minimize human disturbance.*





Shaking hands to seal a cooperative agreement to conserve the endangered barren's topminnow are Bob Hatcher, TWRA Endangered Species Coordinator, and Mr. Joseph Banks, owner of the manmade pond in the background which supports about 90 percent of the fish. Others pictured are (from left to right) Ms. Day Lohmann, Tennessee Nature Conservancy; Jeff Prestwich, TWRA Area Endangered Species Coordinator; and Mrs. Bertha Banks.

the requirements of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). After completion of this project in 1982, it is hoped that such methods will be useful for determining baseline bobcat population trend data for future management of this species. Harvest of bobcat is monitored by the State through a bobcat tagging program and required reporting by fur dealers.

Since about 1950, the streams where

the Ohio River muskellunge (*Esox masquinongy ohioensis*) lives have been severely polluted from surface and underground coal mines. TWRA is hatching and restocking the muskellunge in streams that have recovered sufficiently from pollution. Suitable water quality, however, is seriously threatened by increasing coal demands.

Tennessee has very diverse habitats which host a wide variety of wildlife species. Other endangered wildlife in

Tennessee which are protected by either State or Federal laws include: the snail darter (*Percina tanasi*), lake sturgeon (*Acipenser fulvescens*), eastern cougar (*Felix concolor cougar*), river otter (*Lutra canadensis*), peregrine falcon (*Falco peregrinus*), painted snake coiled forest snail (*Anguispira picta*), and 16 endangered mussels. Tennessee lists 57 endangered and threatened wildlife species, of these, 28 are also federally listed.

#### Future Plans

Beginning fiscal year 1983, Federal funds which were formerly available for endangered wildlife conservation under Section 6 of the Endangered Species Act will no longer exist. Despite financial setbacks, however, it is believed that Tennessee's program has enough public support and volunteers to enable continuation of priority programs and for planning of future projects.

During 1982 and 1983, TWRA plans to continue its bald eagle and osprey hacking projects at previous rates, with increased use of qualified volunteers to offset budgetary cuts. Sometime between 1983 and 1985, hacking of peregrine falcons is proposed.

Plant conservation in Tennessee will be featured in a later issue of the BULLETIN. The Tennessee Heritage Program has official authority to conserve plants in the State.

This article was coauthored by Alison Chisholm, an English major at Marymount College of Virginia in Arlington, Virginia.

## LEOPARD

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standard comment period, which ended June 24, 1980, was reopened until December 24, 1980, because of strong public interest. In part because of the controversial nature of the proposed action, and to insure that the final decision would be based on the best available biological data, the Service contracted for another study, "The Leopard *Panthera pardus* and Cheetah *Acinonyx jubatus* in Kenya" (see October 1981 BULLETIN); the comment period was again reopened from September 8, 1981, to October 8, 1981.

Over 1,000 written comments to the proposal were received. Of these, more than 90 percent opposed both the proposed reclassification and the proposed regulations to allow the importation of trophies under CITES, although most of these communications were personal

opinions and provided no substantive data. Those comments that did contain significant information or matters of special concern were addressed by the Service in the final rulemaking. Upon a re-examination of the original status reports, the 1981 leopard study, the public comments, and information from many of the affected African nations, the Service modified the action as originally proposed. The populations to be reclassified as Threatened were changed from those of all sub-Saharan Africa to only those of southern Africa. No country objecting to the proposal was affected by the final rulemaking.

#### Effects of the Rulemaking

Although leopard populations in southern Africa have been reclassified as Threatened, they will still receive protection under the Endangered Species Act of 1973, and all leopards will be retained on Appendix I of CITES. No commercial trade in leopard products is

authorized, and importation of these products into the United States will continue to be strictly prohibited.

Legally taken sport-hunted trophies of Threatened leopards may be imported into the United States provided the importer has obtained a permit from the U.S. Management Authority under the terms and conditions of CITES. In addition, permits for Threatened species may be issued for scientific purposes to enhance the survival or propagation of the species, for educational purposes, or for other reasons consistent with the purposes of the Act.

Since the leopard is killed indiscriminately in parts of Africa because of predation on livestock, the Service believes that limited sport hunting would benefit the species as a whole by creating an economic incentive for its conservation. Hunting license and guide fees are expected to give the affected countries the means to manage the leopard as another natural resource.



## REGIONAL BRIEFS

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mussel (*Conradilla caelata*). TVA plans to complete its analysis of the data and present the results to the committee by June or July of this year.

**Region 5**—The Virginia Round-leaf Birch Recovery Plan has been submitted to the Director for approval. This will be the first recovery plan completed for a listed tree, and one of the first for any plant.

Regional endangered species personnel are reviewing a proposal from the State of Massachusetts to use ospreys as "foster parents" for bald eagle chicks on Martha's Vineyard Island.

**Region 6**—Representatives from the Service, Bureau of Land Management, Utah Division of Wildlife Resources, and the University of California met in Salt Lake City recently to discuss development of the Beaver Dam Slope Desert Tortoise Recovery Plan.

Last December, about 7,300 humpback chub (*Gila cypha*) were taken from the Willow Beach National Fish Hatchery in Arizona via helicopter into Cataract Canyon, Utah, and released in the Colorado River to supplement existing populations. The fish averaged about 3 inches in length, and had been marked with coded wire nose tags. The area will be monitored in future years, and all captured humpback chubs will be screened with a field sampling detector to check for the presence of the magnetized tag.

The October 1981 BULLETIN reported on a Memorandum Opinion and Order issued by the United States District Court for Colorado regarding a lawsuit brought by the Colorado River Water Conservation District and other plaintiffs against the Department of Interior and the State of Colorado. The court ordered that summary judgement be entered for the plaintiff river districts, declaring that the designations and listings of the Colorado River squawfish (*Ptychocheilus lucius*) and humpback chub as Endangered species are invalid and void. Since then, the court has withdrawn the Memorandum Opinion and Order, and vacated the judgement. The court found that the fish were properly classified as Endangered.

Unfortunately, this does not end the case. Summary judgement has not been made on the plaintiffs' claim that the Federal defendants' impoundment projects are in violation of the Endangered Species Act; thus, they request the court "to order the Defendants to open the gates on every dam on the Colorado River System and substantially return the river to its natural condition." Summary judgement also has not been made on the plaintiffs' claims that

(1) competition and predation by exotic, or non-native, fishes have caused the decline of the chub and squawfish, (2) non-native parasites and diseases have been introduced as a side effect of stocking these fishes, and (3) continued stocking and limitations on catching non-native fishes demonstrate a preference for these fishes which, if allowed to continue, will eradicate the chub and squawfish populations.

**Region 7**—A status report has been completed on the Endangered short-tailed albatross (*Diomedea albatrus*). Once common in Alaskan waters, this species is now the rarest of all albatrosses. *D. albatrus* is making a slow recovery, now numbering 250 birds on Torishima and Minami Kojima, Japan. A limited number of copies of the 36-page status report are available upon request from the Alaska Regional Office.

During the 1982 field season, the Alaska office will continue the peregrine falcon survey and banding efforts on five rivers in the interior and North Slope regions of Alaska. Additionally, it will be surveying the northwest coastal region of the State in anticipation of oil and gas exploration in this area. As in 1981 Alaska office researchers will trap

adult peregrines from interior populations to obtain blood samples for pesticide analysis. In 1982, blood from adults from the North Slope regions will also be sampled. Preliminary results from the analysis of samples collected in 1981 indicate higher pesticide residues in Alaska birds than of those recorded from peregrines on Padre Island, Texas (also collected in 1981). In cooperation with the Migratory Bird Program, migration studies on peregrine falcons and other raptors will begin in southeastern Alaska this year.

Field activities planned for the Aleutian Canada goose (*Branta canadensis leucopareia*) recovery effort in 1982 include a spring survey of release islands (Agattu, Amchitka, and Alaid/Nizki), an estimate of the Buldir Island nesting population, the release on Agattu Island of propagated birds from the Northern Prairie Wildlife Research Center, and the trapping and transplanting of birds from Buldir to Agattu Island.

According to Brian Johns of the Canadian Wildlife Service, no Eskimo curlews (*Numenius borealis*) were seen this past summer during a brief survey of the Anderson River region in the Northwest Territories.

## Hawksbill Nesting in Florida

On October 22, 1981, a female sea turtle deposited a clutch of 170 eggs on Soldier Key, Florida (next to Key Biscayne National Monument). Between January 20-26, 1982, the young emerged and were found to be hawksbills (*Eretmochelys imbricata*). This is one of the first verified hawksbill nestings in the United States, and the first where voucher specimens have been acquired.

The nesting was unusual in several other respects. Until this time, the latest sea turtle nesting record in the U.S. during any season was that of a green turtle (*Chelonia mydas*) on September 6, 1981; the hawksbill nesting is the first sea turtle nesting known to occur in

colder months in Florida.

After the October 22 nesting was reported, Dr. George Dalrymple of Florida International University (FIU) moved approximately half the eggs to an incubation chamber. A total of about 50 eggs hatched, including those remaining in the Soldier Key nest. Environmental stress from low temperatures and the long incubation time (over 90 days at both locations) are thought to have contributed to developmental abnormalities that have plagued the clutch. Most of the hatchlings died within a few days, and only a few remained alive as of February 5 at FIU and the Miami Seaquarium. Unfortunately, none are expected to survive.

## PUPFISH

*Continued from page 1*

Game concurred with the available evidence, but proposed to continue surveying potential habitats until 1979, after which removal from the list was recommended if no other populations were discovered.

Additionally, the Service received comments on the proposal from seven concerned citizens, all of whom considered delisting inadvisable. Six respondents had observed pupfishes, five of them in the vicinity of Tecopa, which they logically assumed were Tecopa pupfish. However, biologists generally

concur that all specimens examined in the area since 1970 represent an unlisted subspecies (*C. nevadensis amargosae*), which is widespread and locally common in parts of the Amargosa River system and in other springs in and near Tecopa. The Tecopa pupfish had considerably larger scales plus several proportional and other differences which distinguished it from the Amargosa River pupfish subspecies.

Continuing concern and conservation efforts for *C. nevadensis amargosae* are justified, because its range and habitat are also limited. This surviving sub-

*Continued on page 8*

## BOBCAT

*Continued from page 3*

the CITES criteria for listing species and delisting them from the appendices. Copies of the full text of the Service's proposal which will be sent to the CITES Secretariat are available from the Office of the Scientific Authority, U.S. Fish and Wildlife Service, Washington, D.C. 20240.

### Postal Procedure

The Service will send the bobcat delisting proposal to the CITES Secretariat for consideration through the mail procedure. Upon receiving the proposal, the Secretariat will circulate it to all Parties. Parties have 60 days to submit to the Secretariat comments and data on the proposal. These data and comments are then combined and communicated to all the Parties by the Secretariat. If no objection is received by the Secretariat within 30 days of the date replies and recommendations were sent to the Parties, the amendment (the proposal in question) will enter into force in 90 days, except for those Parties which take reservations. If an objection by any Party is received by the Secretariat, the proposed amendment will be submitted to a postal vote after the Secretariat has notified all the Parties that an objection has been received.

Unless the Secretariat receives the votes for, against, or in abstention from at least one-half of the Parties within 60 days of the date of notification, the proposed amendment will be referred to the next biennial meeting of the Conference for further consideration. If votes are received from one-half of the Parties, the amendment must be adopted by a two-thirds majority of Parties casting votes. The Secretariat notifies all Parties of the result of the vote.

## BOX SCORE OF SPECIES LISTINGS

Category	ENDANGERED			THREATENED			SPECIES* TOTAL
	U.S. Only	U.S. & Foreign	Foreign Only	U.S. Only	U.S. & Foreign	Foreign Only	
Mammals	15	17	224	3	0	22	281
Birds	52	14	144	3	0	0	213
Reptiles	7	6	55	8	4	0	80
Amphibians	5	0	8	3	0	0	16
Fishes	28	4	11	12	0	0	55
Snails	3	0	1	5	0	0	9
Clams	23	0	2	0	0	0	25
Crustaceans	1	0	0	0	0	0	1
Insects	7	0	0	4	2	0	13
Plants	51	2	0	7	1	2	63
<b>TOTAL</b>	<b>192</b>	<b>43</b>	<b>445</b>	<b>45</b>	<b>7</b>	<b>24</b>	<b>756</b>

\*Separate populations of a species, listed both as Endangered and Threatened, are tallied twice. Species which are thus accounted for are the leopard, gray wolf, bald eagle, American alligator, green sea turtle, and Olive ridley sea turtle.

Number of species currently proposed: 11 animals  
9 plants

Number of Critical Habitats Listed: 50  
Number of Recovery Teams appointed: 69  
Number of Recovery Plans approved: 46  
Number of Cooperative Agreements signed with States:  
38 fish & wildlife  
11 plants

January 31, 1982

## PUPFISH

*Continued from page 7*

species and its habitat needs have been considered locally in planning and development of the region, at least partially, because of the listing of its less fortunate relative. It is not presently in danger of extinction.

The Director of the California Department of Fish and Game summarized the status findings of his agency, stating that Tecopa pupfish were either extinct or at such low population densities that sampling methods were unproductive. He indicated that a lookout for possible survivors would continue whether or not the species was delisted.

## New Publication

The Proceedings of the first annual meeting of the Gopher Tortoise Council entitled "The dilemma of the gopher tortoise—Is there a solution?" is now available. It can be ordered from Richard Franz, Florida State Museum, University of Florida, Gainesville, Florida, 32611 for \$5.00.

Materials featured in the "New Publications" column are presented for information purposes only. The mention of non-Federal government publications does not imply concurrence with their contents or with the philosophies of the various publishers.

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# ENDANGERED SPECIES

## Technical Bulletin

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